

WHAT IS CLAIMED IS

BEST AVAILABLE COPY

1. An installation for the treatment and further processing of thermoplastics, comprising

- 5 - a screw-type compounding unit (1), which has
- a housing (2),
 - at least one screw (5, 5') disposed in the housing (2),
 - an electric motor (6) coupled with the at least one screw (5, 5'), and
 - at least one metering device (10, 14) with a metering motor (12,

10 15);

 - a processing unit (26, 30) directly downstream of the screw-type compounding unit (1) and intermittently drivable at a cycle time t_T ,
 - which has a drive (28) to be actuated at a cycle time t_T , and
 - a control unit (29), which is connected with the electric motor (6) that

15 serves for actuation of the at least one screw (5, 5'), with the metering motor (12, 15) of the at least one metering device (10, 14) and with the drive (28) of the processing unit (26, 30), and - which is formed for triggering the electric motor (6) and the at least one metering motor (12, 15) by the cycle time t_T of the processing

20 unit (26, 30).

2. An installation according to claim 1, wherein the control unit (29) is formed such that the electric motor (6) for actuation of the at least one screw (5, 5') and the at least one metering motor (12, 15) have identical

25 run-up times t_H .

3. An installation according to claim 1, wherein the control unit (29) is formed such that the electric motor (6) for actuation of the at least one

screw (5, 5') and the at least one metering motor (12, 15) have identical deceleration times t_B .

4. An installation according to claim 1, wherein $t_T \leq 5$ min. applies to the
5 cycle time t_T .

5. An installation according to claim 4, wherein $t_T \leq 2$ min. applies to the cycle time t_T .

10 6. An installation according to claim 5, wherein $t_T \leq 40$ sec. applies to the cycle time t_T .

7. An installation according to claim 1, wherein the screw-type compounding unit (1) comprises a first metering device (10) and a second metering device (14).
15

8. An installation according to claim 1, wherein the screw-type compounding unit (1) comprises an inlet (16) for rovings (17).

20 9. An installation according to claim 1, wherein the processing unit is a plunger-injection molding machine (30).

10. An installation according to claim 1, wherein the processing unit is a press (26).

25

11. An installation according to claim 10, wherein an intermittently drivable cutting unit (21) is disposed downstream of the screw-type compounding unit (1).

12. An installation according to claim 10, wherein an intermittently drivable conveying device (23) is disposed upstream of the press (26).

5 13. An installation according to claim 1, wherein the screw-type compounding unit (1) is a twin-screw machine.

14. An installation according to claim 1, wherein the screw-type compounding unit (1) is a twin-screw extruder.

10

15. An installation according to claim 11, wherein an intermittently drivable conveying device (23) is disposed upstream of the press (26).

15

16. A method for the operation of an installation for the treatment and further processing of thermoplastics, comprising

20

- a screw-type compounding unit (1), which has
 - a housing (2),
 - at least one screw (5, 5') disposed in the housing (2),
 - an electric motor (6) coupled with the at least one screw (5, 5'), and
 - at least one metering device (10, 14) with a metering motor (12, 15);

25

- a processing unit (26, 30) directly downstream of the screw-type compounding unit (1) and intermittently drivable at a cycle time t_T ,
 - which has a drive (28) to be actuated at a cycle time t_T , and
- a control unit (29), which is connected with the electric motor (6) that serves for actuation of the at least one screw (5, 5'), with the metering motor (12, 15) of the at least one metering device (10, 14) and with the drive (28) of the processing unit (26, 30), and

-- which is formed for triggering the electric motor (6) and the at least one metering motor (12, 15) by the cycle time t_T of the processing unit (26, 30),

wherein the electric motor (6) and the at least one metering motor (12, 15)
5 are triggered by the cycle time t_T of the processing unit (26, 30).

17. A method according to claim 16, wherein the electric motor (6) for actuation of the at least one screw (5, 5') and the at least one metering motor (12, 15) are triggered by identical run-up times t_H .

10

18. A method according to claim 16, wherein the electric motor (6) for actuation of the at least one screw (5, 5') and the at least one metering motor (12, 15) are triggered by identical deceleration times t_B .